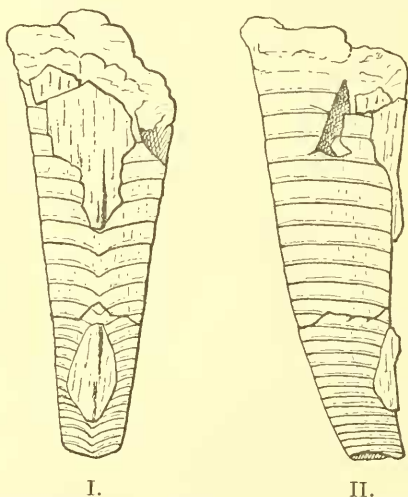


NOTE ON A DIBRANCHIATE CEPHALOPOD FROM THE LONDON
CLAY OF SHEPPEY.

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Read 14th June, 1901.

THE specimen forming the subject of the present note (see Figs. I & II) is a conically-shaped cast in iron-pyrites, having on its surface indications of a number of septa. It was found in the London Clay of the Isle of Sheppey, and was forwarded to Dr. H. Woodward by Mr. W. H. Shrubsole, who writes: "It is the first I have seen, and differs somewhat from the specimens from the London Clay."



I.

II.

Beloptera (Belopterina) Levesquei, D'Orbigny.—I, ventral aspect of natural cast in iron-pyrites of conical cavity of rostrum; II, lateral aspect of the same. London Clay: Isle of Sheppey. $\times \frac{2}{3}$.

The cone, which is truncated, has an apical angle of from 12° to 13° between the two sides, and from 10° to 11° between the ventral and dorsal surfaces; it is 34 mm. long and nearly circular in cross section, the diameter of the larger end being 13 mm. and of the smaller end 3.5 mm. The fossil is slightly curved, particularly the smaller or posterior end; the inner surface, i.e. the ventral, is a little

depressed, and bears throughout its length a median, broad, shallow, feebly-marked groove. There are twenty-five sutures, their distance apart ranging from 2 mm. on the anterior portion of the specimen to 0.5 mm. on the posterior part; on the sides they are very slightly oblique, sloping towards the ventral surface, and in the middle of this surface each has a very small V-shaped lobe. The specimen has been broken across; it is partly hollow, and, so far as one can see, exhibits no signs of septa or siphuncle. On the ventral surface there are two patches of an outer covering, each of which, the anterior one especially, appears to consist of two layers, an inner thin and fairly dense layer, and an outer one which is much less dense and only partially preserved, the fragments that are left having a coarse fibrous appearance, the fibres being arranged longitudinally. The outer layer seems to have had a strong median ridge, portions of this being preserved on each patch, along the median line of the ventral surface. This ridge is 1.5 mm. wide on the anterior patch, and about 1 mm. wide on the posterior one; it is ill-defined laterally, and may therefore be only a portion of a much wider ridge which occupied the median line of this surface.

So far as I am aware, the only dibranchiate Cephalopod hitherto recorded from the London Clay of Sheppey is *Belosepia sepioidea*, Blainville,¹ but the present specimen cannot be a cast of the posterior cavity of that form, because its apical angle is too small, and the cavity, which is represented by this natural cast, is much too deep and too large. The affinities of the present specimen seem, however, to be with the genus *Beloptera*, Blainville.² In this genus the rostrum only is known, consisting of two conical portions, the anterior one hollow and the posterior one solid, joined together by their apices and connected by two more or less salient lateral expansions. The species of this genus fall into two sections: one includes those forms in which the lateral expansions are well developed and constitutes the genus *Beloptera* (*sensu stricto*); the other comprises the forms in which the lateral expansions are quite rudimentary or, according to some authors, absent, and constitutes the subgenus *Belopterina* of Munier-Chalmas.³ In *Beloptera* (*sens. str.*) the anterior conical portion of the rostrum usually bears on its ventral surface two more or less prominent ridges, one on each side of the median line, whereas in *Belopterina* there is a single median well-developed ridge. In some of the examples of *Beloptera belemnioidea*⁴ (or *belemnitoidea*⁵) in the British Museum collection, particularly in the example figured by J. de C. Sowerby⁶

¹ De Blainville: Man. Malacologie, 1825, p. 622, Atlas (1827), pl. xi, fig. 7. See also R. B. Newton & G. F. Harris: Proc. Malac. Soc., vol. i, pt. 3 (June, 1894), p. 120.

² De Blainville: Man. Malacologie, 1825, pp. 621, 622; and Mém. Bélemnites, 1827, p. 111. See also R. B. Newton & G. F. Harris: Proc. Malac. Soc., vol. i, pt. 3 (June, 1894), p. 122.

³ Bull. Soc. géol. France, sér. II, tom. xxix (1872), p. 531.

⁴ De Blainville: Man. Malacologie, 1825, p. 622, Atlas (1827), pl. xi, fig. 8.

⁵ De Blainville: Mém. Bélemnites, 1827, p. 111, pl. i, fig. 3.

⁶ J. de C. Sowerby: Min. Conch., vol. vi, p. 183 (1828), pl. lxxi, fig. 3.

(No. 43,822*a*) from the Calcaire grossier of France, the anterior conical cavity exhibits traces of septa, and these have, as in the present specimen, a small V-shaped line on the ventral side. The remains, and coarsely fibrous nature, of the prominent median ridge on the ventral surface of the present specimen, however, lead us to refer it to the subgenus *Belopterina*, which includes two species—*B. Levesquei*, D'Orbigny¹ (the type), and *B. Edwardsi*, Deshayes.² The type-specimen of *B. Edwardsi* was obtained from the Calcaire grossier at Chaumont, and is unique. Although *B. Levesquei* is extremely rare, two specimens have been recorded and figured by F. E. Edwards³ from the London Clay of Highgate. These two examples are now in the British Museum collection (Nos. 69,339*a* and *b*), and after comparing the present specimen with them, particularly with the larger example, I am led to think that the Sheppey fossil is most probably specifically identical with them.

¹ A. d'Orbigny: Paléont. univers., 1845, pl. viii, figs. 10–12. De Férussac & A. d'Orbigny: Hist. nat. Ceph. acetab., 1835–1848, p. 295, Seiches, pl. xx, figs. 11, 12.

² G. P. Deshayes: Anim. sans vertèbres, vol. iii (1866), p. 620, pl. cvii, figs. 3, 4.

³ F. E. Edwards: Eocene Mollusca (Mon. Pal. Soc.), pt. i (1849), p. 37, pl. ii, figs. 2*a*–*c* (No. 69,339*b*), and *d*, *e* (No. 69,339*a*).